

Application No.: 10/671,289
Amendment and Response dated April 3, 2006
Reply to final Office Action of November 2, 2005
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Remarks/Arguments:

Introduction

Claims 1-8 and 10-11 are pending. Claims 10 and 11 have been amended to further describe the composition as consisting essentially of dye, water, lower alcohol and humectant and optionally containing a surfactant, bactericide and/or a fungicide. Support for these amendments may be found in the specification at paragraph [0016]. No new matter is introduced with these amendments.

Section 103 Rejections

Claims 1-4 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 6,139,611 to Kovacs et al. (hereinafter "Kovacs") in view of U.S. Patent No. 4,021,252 to Banczak et al. (hereinafter "Banczak"). Applicants respectfully traverse.

As acknowledged by the Examiner, Kovacs fails to teach or suggest, *inter alia*, an ink composition having a viscosity greater than 3 cP. Kovacs, however, has additional deficiencies. For example, Kovacs fails to teach or suggest an ink composition having a lower alcohol content of 5-30 wt. %. Kovacs merely suggests that a typical ink composition may include 2-20% water miscible co-solvents. (Kovacs, column 5, lines 45-50) Such co-solvents include a wide variety of materials, including alcohols, ketones, ethers and esters. (Kovacs, column 5, lines 12-23) Further, in the fifteen inventive samples presented by Kovacs at column 6, line 40, to column 7, line 26, none of those ink compositions teach or suggest an ink composition having a lower alcohol content of 5-30 wt. %. Thus, Kovacs fails to teach an ink composition having a viscosity greater than 3 cP and having a lower alcohol content of 5-30 wt. %.

Banczak fails to cure the all of deficiencies of Kovacs. At column 8, lines 24-32, Banczak teaches that a certain described ink composition has a viscosity of 5.2 cP. That

specifically described ink composition contains 19 wt. % distilled water and 67.5 wt. % lower alcohol (9.5 wt. % ethyl alcohol and 58 wt. % isopropyl alcohol). Such a large amount of lower alcohol is in direct contrast to the claimed limitation of 5-30 wt. % lower alcohol of the present invention. Moreover, both ethyl and isopropyl alcohols are lower alcohols as defined by the present invention. The examiner may not properly choose just one of these constituents from the ink composition of Banczak while ignoring the other.

Such an improper selection, i.e. picking only ethyl alcohol and ignoring isopropyl alcohol, would also be in contradiction to the specific teachings of Banczak. For example, Banczak specifically teaches that its ink compositions must contain a higher amount of alcohol as compared to the amount of water. In particular, Banczak teaches that its compositions must contain from 1.5 to 5 times more alcohol than water. (Banczak, column 6, lines 14-39) The ratio of 67.5 wt. % ethyl and isopropyl alcohol to 19 wt. % water is about 3.6, which is within the required range of Banczak. Choosing only the ethyl alcohol, as suggested by the examiner, would result in an alcohol to water ratio of 0.5. i.e., $9.5 \div 19.5$. Such a selection by the examiner is not only improper, but is in direct contrast to the teaching of Banczak. Indeed, Banczak teaches away from the examiners approach because it is in violation of the specific teachings of Banczak.

Thus, the combination of Kovacs and Banczak fails to teach or suggest the present invention because Banczak specifically teaches only ink compositions having drastically higher alcohol contents than the present invention and that only such high alcohol-containing compositions have a viscosities of greater the 3 cP. Moreover, Banczak teaches away from Kovacs and its lower amounts of co-solvents, including lower alcohols, because such lower amounts would fall outside the specific water to alcohol ratios of Banczak.

Accordingly, Kovacs and Banczak fail to teach or suggest the invention as presently defined by independent claim 1. Reconsideration and withdrawal of the rejections of claims 1-4 are therefore respectfully requested.

Furthermore, the combination of Kovacs and Banczak fail to teach or suggest the method of claim 10 or the composition of claim 11. For example, Kovacs specifically requires that its ink composition must contain a hardener. (Kovacs, column 2, lines 43-49) Elimination of the hardener from Kovacs would defeat the purpose, intent and function of Kovacs' ink composition. Accordingly, any such attempt to so modify Kovacs would fail to present a *prima facie* case of obviousness. Similarly, Banczak requires that all of its ink compositions must contain a resin component, i.e. shellac. (Banczak, column 7, lines 42-55) Elimination of the shellac from Banczak would also defeat the purpose, intent and function of Banczak's ink composition. Accordingly, any such attempt to so modify Banczak would fail to present a *prima facie* case of obviousness. Thus, claims 10 and 11 are patentably distinct over Kovacs and Banczak.

Claims 5-8 are rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kovacs in view Banczak and further in view of U.S. Patent No. 5,755,862 to Gregory et al. (hereinafter "Gregory"). Applicants respectfully traverse.

The examiner cites Gregory for its alleged teachings of humectant to lower alcohol ratios. Gregory, however, fails to cure the deficiencies of Kovacs and Banczak. For example, Gregory fails to teach or suggest an ink composition having a viscosity of greater than 3 cP. The only composition recited by the examiner having a viscosity within the claimed range is Banczak, and the teachings of Banczak are in direct contradiction not only with the present invention, but also with the teachings of Kovacs. Further, Banczak is also in direct contrast to the teachings of Gregory as every ink composition in Table 1 is in violation of Banczak's requirements of alcohol to water ratios. Such a combination as proposed by the examiner would destroy the intent, purpose and function of Banczak, and therefore fails to present a *prima facie* case of obviousness.

Moreover, with respect to the claimed composition, i.e., claim 8, the examiner's use of the teachings regarding the humectant to lower alcohol ratio of Gregory is not particularly clear

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as claim 8 does not contain such a limitation. Further, with respect to the method claims, Gregory fails to teach or suggest that its compositions could be used as claimed, including, *inter alia*, piezo drop-on-demand printing, including printing on a substrate having a swelling polymer, such as presented in claim 7.

Accordingly, Kovacs, Banczak and Gregory, individually or in combination, fail to teach or suggest the invention as presently defined by claims 5-8. Reconsideration and withdrawal of the rejections of claims 5-8 are therefore respectfully requested.

Therefore, reconsideration and withdrawal of the claim rejections under 35 U.S.C. §103(a) are respectfully requested because Kovacs, Banczak and Gregory, individually or in combination, fail to teach or suggest the present invention.

Summary

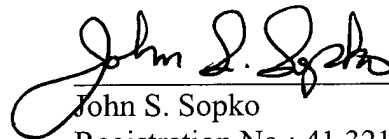
Therefore, Applicants respectfully submit that independent claims 1 and 8, and all claims dependent therefrom, are patentably distinct. This application is believed to be in condition for allowance. Favorable action thereon is therefore respectfully solicited.

Should the Examiner have any questions or comments concerning the above, the Examiner is respectfully invited to contact the undersigned attorney at the telephone number given below.

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The Commissioner is hereby authorized to charge payment of any additional fees associated with this communication, or credit any overpayment, to Deposit Account No. 08-2461. Such authorization includes authorization to charge fees for extensions of time, if any, under 37 C.F.R. § 1.17 and also should be treated as a constructive petition for an extension of time in this reply or any future reply pursuant to 37 C.F.R. § 1.136.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "John S. Sopko", is written over a horizontal line.

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